

SUBSTITUTE
SEQUENCE LISTING

5 (1) GENERAL INFORMATION:

(i) APPLICANT: BRACCO, Laurent
SCHWEIGHOFFER, Fabien
TOCQUE, Bruno

10 (ii) TITLE OF INVENTION: CONDITIONAL EXPRESSION SYSTEM

(iii) NUMBER OF SEQUENCES: 29

15 (iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Rhone-Poulenc Rorer Inc.
(B) STREET: 500 Arcola Road, Mailstop 3C43
(C) CITY: Collegeville
(D) STATE: PA
20 (E) COUNTRY: USA
(F) ZIP: 19426

(v) COMPUTER READABLE FORM:

25 (A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

30 (vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:
(B) FILING DATE:
(C) CLASSIFICATION:

35 (vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: FR 95/03841
(B) FILING DATE: 31-MAR-1995

40 (vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: WO PCT/FR96/00477
(B) FILING DATE: 29-MAR-1996

45 (viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Fehlnar Esq., Paul F.
(B) REGISTRATION NUMBER: 35,135
(C) REFERENCE/DOCKET NUMBER: ST95021-US

50 (ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (610) 454-3839
(B) TELEFAX: (610) 454-3808

55 (2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: cDNA

10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

TCTCTATCAC TGATAGGGA

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15 (2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: cDNA

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

TATCACCGCA AGGGATA

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30 (2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 74 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

35 (ii) MOLECULE TYPE: peptide

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

Lys Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg
1 5 10 15

Glu Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys
20 25 30

Asp Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser
35 40 45

His Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu
50 55 60

55 Met Phe Lys Thr Glu Gly Pro Asp Ser Asp
65 70

(2) INFORMATION FOR SEQ ID NO:4:

5 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 768 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

15 TTACTCGCGG CCCAGCCGGC CATGGCCCAG GTGCAGCTGC AGCAGTCTGG GGCAGAGCTT 60
 GTAAGGTCAG GGGCCTCACT CAAAGTTGTCC TGCACAGCTT CTGGCTCAA CATTAAAGAC 120
 TACTATATGC ACTGGGTGAA GCAGAGGCCT GAACAGGGCC TGGAGTGGAT TGGATGGATT 180
 20 GATCCTAAGA ATGGTGATAC TGAATATGCC CCGAAGTTCC AGGGCAAGGC CACTATGACT 240
 GCAGACACAT CCTCCAATAC AGCCTACCTG CAGCTCAGCA GCCTGGCATC TGAGGACACT 300
 25 GCCGTGTATT ATTGTAATT TTACGGGAT GCTTTGGACT ATTGGGCCA AGGGACCACG 360
 GTCACCGTCT CCTCAGGTGG AGGCAGGTCA GCCGGAGGTG GCTCTGGCGG TGGCGGATCG 420
 GATGTTTTGA TGACCCAAAC TCCACTCACT TTGTCGGTTA CCATTGGACA ACCAGCCTCC 480
 30 ATCTCTTGCA AGTCAAGTCA QAGCCTCTTG GATA GTGATG GAAAAACATA TTTGAATTGG 540
 TTGTTACAGA GGCCAGGCCA GTCTCCAAAG CGCCTAATCT ATCTGGTGTCA TAAACTGGAC 600
 35 TCTGGAGTCC CTGACAGGTT CACTGGCAGT GGATCAGGGA CAGATTTCAC ACTTAAAATC 660
 AACAGAGTGG AGGCTGAGGA TTTGGGAGTT TATTATTGCT GGCAAGGTAC ACATTCTCCG 720
 CTTACGTTCG GTGCTGGCAC CAAGCTGGAA ATTAAACGGG CGGCCGCA 768

40 (2) INFORMATION FOR SEQ ID NO:5:

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 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 15 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

50 (ii) MOLECULE TYPE: peptide

55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO:6:

5 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 30 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA

15 (ix) FEATURE:
 (A) NAME/KEY: CDS
 (B) LOCATION: 1..30

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

20 CCC AAG CCC AGT ACC CCC CCA GGT TCT TCA
 Pro Lys Pro Ser Thr Pro Pro Gly Ser Ser
 1 5 10

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(2) INFORMATION FOR SEQ ID NO:7:

25 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 10 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

30 (ii) MOLECULE TYPE: protein

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

35 Pro Lys Pro Ser Thr Pro Pro Gly Ser Ser
 1 5 10

(2) INFORMATION FOR SEQ ID NO:8:

40 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 18 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: cDNA

50 (ix) FEATURE:
 (A) NAME/KEY: CDS
 (B) LOCATION: 1..18

55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

55 ATG AAC CGG CTG GGC AAG
 Met Asn Arg Leu Gly Lys
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(2) INFORMATION FOR SEQ ID NO:9:

5 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 6 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Met Asn Arg Leu Gly Lys
 1 5

(2) INFORMATION FOR SEQ ID NO:10:

20 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 33 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: cDNA

(ix) FEATURE:
 (A) NAME/KEY: CDS
 (B) LOCATION: 1..33

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

35 GAA CAA AAA CTC ATC TCA GAA GAG GAT CTG AAT 33
 Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
 10 15

40 (2) INFORMATION FOR SEQ ID NO:11:

45 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 11 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
 1 10

55 (2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 7 amino acids
 (B) TYPE: amino acid

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(C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: peptide

10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

1 Pro Lys Lys Lys Arg Lys Val
 1 5

15 (2) INFORMATION FOR SEQ ID NO:13:

20 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 76 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: cDNA

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

35 GGCTCTAGAC CCAAGCCCCAG TACCCCCCCTA GGTCTTCAA CGCGTGGATC CATGTCCAGA 60
 40 TTAGATAAAA GTAAAG 76

45 (2) INFORMATION FOR SEQ ID NO:14:

50 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 51 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

55 (ii) MOLECULE TYPE: cDNA

60 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

65 CGTACGGAAT TCGGGCCCTT ACTCGAGGGA CCCACTTTCA CATTAAAGTT G 51

70 (2) INFORMATION FOR SEQ ID NO:15:

75 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 76 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

80 (ii) MOLECULE TYPE: cDNA

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5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

GGCTCTAGAC CCAAGCCCAG TACCCCCCA GGTCTTCAA CGCGTGGATC CATGGAACAA 60

CGCATAACCC TGAAAG 76

10 (2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 51 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: cDNA

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CGTACGGAAT TCGGGCCCTT ACTCGAGTGC TGTGTTTTT TTGTTACTCG G 51

30 (2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

35 (ii) MOLECULE TYPE: cDNA

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

CAGGCCATGG CATGAAGAAA CCACTGGATG GAGAA 35

45 (2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 43 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

55 (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Sequence Description

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CGTCGGATCC TCTAGATGCG GCCGCGTCTG AGTCAGGGCC CTT

43

(2) INFORMATION FOR SEQ ID NO:19:

5 (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) POLYMER: DNA

(ii) MOLECULE TYPE: cDNA

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

CAGGCTCGAG AAGAAACCAC TGGATGGAGA A

31

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 61 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

CAGGCTCGAG CCCAAGCCCC GTACCCCCCC AGGTTCTTCA AAGAAACCAC TGGATGGAGA

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A 61

40 (2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

55 GGTCGAATTC GGGCCCTCAG TCTGAGTCAG GCCCTTC

37

(2) INFORMATION FOR SEQ ID NO:22:

5 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 29 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

20 CAGGCCATGG AGGAGCCGCA GTCAGATCC

29

25 (2) INFORMATION FOR SEQ ID NO:23:

30 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 46 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

35 (ii) MOLECULE TYPE: cDNA

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

45 CGTCGGATCC TCTAGATGCG GCCGCCACGG GGGGAGCAGC CTCTGG

46

50 (2) INFORMATION FOR SEQ ID NO:24:

55 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 66 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

60 (ii) MOLECULE TYPE: peptide

65 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

70 Met Glu Gln Arg Ile Thr Leu Lys Asp Tyr Ala Met Arg Phe Gly Gln
 1 5 10 15

75 Thr Lys Thr Ala Lys Asp Leu Gly Val Tyr Gln Ser Ala Ile Asn Lys
 20 25 30

80 Ala Ile His Ala Gly Arg Lys Ile Phe Leu Thr Ile Asn Ala Asp Gly
 35 40 45

85 Ser Val Tyr Ala Glu Glu Val Lys Pro Phe Pro Ser Asn Lys Lys Thr
 50 55 60

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5 (2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 23 base pairs
 (B) TYPE: nucleic acid
 10 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

20 GATCCTATCA CCGCAAGGGA TAA

23

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 23 base pairs
 (B) TYPE: nucleic acid
 25 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

30 (ii) MOLECULE TYPE: cDNA

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

GATAGTGGCG TTCCCTATTT CGA

23

(2) INFORMATION FOR SEQ ID NO:27:

40 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 48 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 45 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

GATCCGACTT TCACCTTTCT CTATCACTGA TAGTGAGTGG TAAACTCA

48

55 (2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

30 35 40 45 50 55 60 65 70 75 80 85 90

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5 (A) LENGTH: 48 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

AGCTTGAGTT TACCACTCCC TATCAGTGAT AGAGAAAAAGT GAAAGTCG

48

15 (2) INFORMATION FOR SEQ ID NO:29:

20 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 96 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: cDNA

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

30 GATCCGACTT TCAC TTTTCT CTATCACTGA TAGTGAGTGG TAAACTCACT AGGCTCAAAG

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TGAAAAAGAGA TAGTGACTAT CACTCACCAT TTGAGT

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